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Web Site Review

Web Resources for North American Bird Identification

Review by Robert Sullivan and Kirk LaGory
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“Those little nimble musicians of the air, that warble forth their curious ditties, with which nature hath furnished them to the shame of art.”

—Izaak Walton (1593 - 1683)

In this issue we'll focus on Web resources for birds, specifically for bird identification (a future issue's review will address bird conservation sites). There are thousands of resources covering this topic on the Web; we'll review only a few here, and we'll concentrate on several sites that help users identify birds of North America, and some sites specific to birds of Illinois, home of many CW member organizations. As might be expected, some of the sites serve both purposes, and include other useful bird-related information as well. While our list represents only a tiny sample of the available resources, these sites should provide a good starting point for CW members interested in exploring the world of birds via the Web.

This review includes two types of bird identification Web sites:

1. Sites that help users identify unknown birds using a structured query process based on observed bird characteristics (i.e., a key). Sites reviewed here include *The BioDiversity Institute Internet Field Guide to Birds*, *Duncraft Birds of North America*, and *Discover Life IDnature Guide for Birds*.
2. Sites that provide information about bird characteristics by selecting the species name (i.e., a list). While generally less useful than a key for identifying an unknown bird, this type of site can be very useful for identifying a bird if a user has narrowed identification of the bird in question to several known possibilities. Reviewed sites include *Patuxent Bird Identification InfoCenter*, *Cornell Lab of Ornithology Online Bird Guide*, *The Birds of North America Online*, *Illinois Breeding Bird Atlas*, and *Illinois Birds*.

The BioDiversity Institute (BDI) Internet Field Guide to Birds <http://www.bdi.org/>

The BDI *Internet Field Guide to Birds* is a comprehensive guide to the birds of North America, and is specifically designed for bird identification. In addition to providing distinguishing

characteristics and photos/drawings of individual species, the site provides off-site links to other Web information on the species (most notably *NatureServe Explorer*). The *Guide* can also be used to generate checklists for birds in any area, and to obtain information on entire groups of birds.

The identification guide provides three ways for the user to input information to identify birds: geographic area (State or Province); taxonomic information (species, genus, family, order); and/or specific characteristics of the bird. These parameters are entered on one long, but well-organized form. Each selection criterion type is optional in that the user need not input information of a particular type to obtain a list of birds. By inputting geographic area alone, the user can generate a checklist for an area. By inputting taxonomic information, the user can restrict their search to a particular taxonomic group. This is a handy feature; if you know you've seen a striped warbler, there is no reason to include sparrows and sandpipers in your search.

Identifying birds by specifying observed physical characteristics is the most involved approach to bird identification using the *Guide*, as the user is walked through the physical characteristics of the bird in a long series of pull-down menus. Included are body characteristics (body size; body shape; and color and pattern of breast, belly, back, and rump), wing characteristics (wing shape; wing bars; and color and pattern of upper wing coverts, upper primaries, upper secondaries and tertiaries, underwing lining, etc.), head characteristics; tail characteristics; and leg/foot characteristics. The amount of detail that can be input with this system is truly incredible and could be daunting. One could argue that if the user knows the difference between tertiaries and secondaries, they probably won't need the system for identification; however, the user does not need to input this level of information to narrow down their search.

Output from a search is provided in the form of a series of thumbnail images that can then be used to either narrow your search or to link to other information on the species including distinguishing characteristics; (generally) high-quality images (colored illustrations as well as photos); status; life history; and distribution information. Much of the non-image information is provided through direct links to *NatureServe Explorer* (reviewed in *CW Journal* Vol. 2, No. 1). An innovative feature built into the results page for any query is a new form that allows searching of several Internet search engines for additional information on the species and relevant family using "pre-formed" queries, and another "pre-formed" query to search the Google image database for additional images.

The BDI *Internet Field Guide to Birds* is a very good Web site. The database engine is fast and reliable, the site is generally easy to use, and the images are generally high in quality and plentiful. The links to *NatureServe Explorer* provide quick access to detailed information. Of the three sites using a key approach to bird identification reviewed here, it is the best all-around choice.

Duncraft Birds of North America

http://percevia.duncraft.com/db/birds_of_north_america_western/rl/ /0/attrs.aspx

Duncraft is a company that specializes in selling equipment for attracting and feeding birds. Their site, *Duncraft Birds of North America*, accesses a database of 799 bird species found in North America.

The user searches the Duncraft database by selecting one or more bird attributes through pull-down menus, including location, body shape, size, color, bill shape, wing shape, and habitat. The information is accessed one attribute at a time to gradually narrow the list of possible bird species. Thus, if one wants to start with location, a location link is clicked which loads a checklist of choices (States and Provinces). The user then chooses a State, and the list is narrowed to only those birds found in the State. The user would then select another attribute, (such as bill shape) to further narrow the list, and so on, until the best choice is left. At each new level, color thumbnail graphics of all possible species are provided. The list of thumbnails will obviously be quite large until the user gets deeper into the selection process. This navigation is quite slow, especially with a slow internet connection, because the user must wait for all of the thumbnails to load after each selection.

After clicking on the thumbnail of the identified bird, the user is linked to detailed information for the species (and, unfortunately, much information on suggested equipment purchases). The information is quite good and includes a high quality illustration of different plumages, identification tips, life history information, a recording of the bird's call, range maps, and links to related Web sites (Patuxent's bird identification guide, *eNature.com*, *Wikipedia*). Providing the thumbnails at each step allows the user to quickly select the bird in question, but slows the page reloading to a frustrating crawl. Also, the attribute selection process requires some practice to master.

Discover Life IDnature Guide for Birds

http://pick4.pick.uga.edu/mp/20q?guide=Birds&flags=not_no

This site can be used to identify and gain access to information on 1,752 species of birds of North America. It was developed by Discover Life and the Polistes Foundation. Discover Life also provides web-based guides for fish, amphibians, reptiles, mammals, insects, spiders, crabs, snails, slime molds, fungi, plants, and corals. The bird guide functions in a similar fashion to a dichotomous key by providing the user with a series of choices related to location and the physical characteristic of birds (a completely separate selection option is available through a list of species). A picture accompanies each choice to provide guidance. For example, the user is first asked to identify the "group" to which the bird belongs (ducks, geese, swans; game; perching; raptor; sea; shore, wading; woodpecker; other birds). These aren't necessarily typical groupings of birds, but the approach works in the context of the rest of the identification key. Next comes questions on head color, range, wing-bar number, head shape, bill shape, etc. There are 16 questions in all. At any point in the key, the user can choose to search the bird database for matches. We liked the fact that this key teaches users the key things to look for when seeing an unfamiliar bird, and therefore serves as a teaching tool to improve birding skills.

Once the user searches the database for matches, a list of possible species is provided and each species name is linked to a wealth of information on that species from a variety of Web sites (including some of the ones reviewed here). Included are (generally) high-quality photographs, life history information, population and distribution information, and "cool facts." It is interesting that the links provided are specific for each species, so there is an attempt to tailor the information fairly closely to the species of interest.

While the *IDNature Guide for Birds* provides an understandable and useful approach for bird identification, as well as good information on search returns, the site has some drawbacks. The interface is somewhat cluttered, and the search engine is slow. We tried using the intriguing “Report” feature to report a mock sighting, only to find out after numerous errors that the feature is “under development”. The site lacks elegance and needs interface and usability work, but it does have a good search feature for direct access to known species.

Patuxent Bird Identification InfoCenter

<http://www.mbr-pwrc.usgs.gov/>

The *Patuxent Bird Identification InfoCenter* is affiliated with the Patuxent Wildlife Research Center, part of the United States Geological Survey (USGS). Like many USGS sites, the interface is bare bones; a user simply picks a name off a list of species grouped by family common name. The link leads to a frame-based presentation of information about the species, with a menu in a left-hand column, content in the middle of the page, and photo thumbnails in a right-hand column. The default content view is of a bulleted list of identification tips. Other menu choices lead to life history; Breeding Bird Survey (BBS) and Christmas Bird Count (CBC) maps (the BBS and CBC are major bird surveys); photos of eggs; call and song recordings; high-quality taxonomic info (linked from the *Integrated Taxonomic Information System* from the National Museum of Natural History); and links to a glossary and the main list page. The information is sparse but sound—a number of reputable bird sites link back to the *Patuxent Bird Identification InfoCenter* as a content provider. The site is also very fast, because there is no database querying, and the pages are very small. On the downside, while it is comforting to know that the USGS is not wasting tax dollars on such frivolities as search tools, introductory text, or online help, the site would benefit from these features, particularly a search capability. The site would also be enhanced by beefing up the content and photos (both quality and quantity).

Cornell Lab of Ornithology Online Bird Guide

<http://www.birds.cornell.edu/programs/AllAboutBirds/BirdGuide/>

The *Cornell Lab of Ornithology Online Bird Guide*, part of the Lab’s *All About Birds* Web site, is as beautiful as the *Patuxent Bird Identification InfoCenter* is plain. The interface is visually attractive, and in general, the site is a pleasure to use. While our review will focus on the Online Bird Guide, it should be noted that *All About Birds* contains a wealth of bird-related resources; we were repeatedly distracted from our review by wandering off to learn about bird conservation, attracting birds to one’s yard, etc.

One of the few drawbacks of the *Online Bird Guide* site is immediately apparent when selecting a species to view; this is accomplished by selecting the common name of the bird from one of two lists, one organized by family, the other organized alphabetically by common name. These are possibly the longest pull-down menus we have ever encountered, and their usefulness is compromised further by the use of strict alphabetizing. All birds whose full name starts with an adjective (e.g. “Common Loon” or “American Crow”) are listed under the adjective, rather than the noun, and so there are 14 entries under “Common” and 18 entries under “American.” If the user doesn’t know beforehand that the “Pauraque” is, in fact, the “Common Pauraque,” the species is very difficult to find. While “Fish Crows” and

“American Crows” are grouped together on the Taxonomic Order pull-down menu, they are located at a seemingly random spot on the taxonomic list (though it isn’t random in reality). Without a search tool, this approach to selecting a bird species is a real hindrance.

Once past the species selection process, however, the user is presented with a beautifully laid out page featuring one or more high-quality photos of the bird, a range map, and the following descriptive information:

- Description
- Sound (with spectrograms and Real Audio® recordings)
- Conservation Status
- Other Names
- Cool Facts

Sometimes a link to a short video clip (in Quicktime® format) is available as well. The information is of good quality, but not detailed. Clicking a tab takes the user to a detailed description page with additional information, including similar species, range, habitat, food, behavior, and reproduction. Citations are also provided for each page, a useful feature for those wishing to do further research.

The *Cornell Online Bird Guide* performed well in terms of loading pages quickly, and with the exception of the bird selection process, is easy to use and informative, though not detailed. The sounds files, photos, and videos are of very high quality and quite useful. The site is definitely worth exploring.

Birds of North America Online

<http://bna.birds.cornell.edu/BNA/>

Birds of North America Online, produced by the Cornell Laboratory of Ornithology and the American Ornithologists’ Union, is available only by subscription (\$40 annually for individuals, with higher fees for institutions). For anyone serious about birds, the investment would be well worth the money, if the Web site demo pages are representative of the site as a whole. The site is the online version of *Birds of North America*, an 18-volume compilation of life histories of more than 700 North American bird species. The *Birds of North America Online Web* site presents at least an order of magnitude more information than any of the other sites reviewed, and the quality is outstanding. For each species of birds, there are 19 sections of information that total about 30-40 printed pages, liberally sprinkled with outstanding photos, drawings, and linked references. Separate tabs lead to pages of video clips and sounds with spectrograms; photos, maps, and breeding cycle diagrams; and extensive references. The range of topics covered for each bird is extensive, including behavior, migration, populations, and even (under Food Habits) information on Drinking, Pellet-casting, and Defecation. No stone left unturned, obviously.

Without having a paid subscription we were unable to evaluate the full site, which reportedly includes a searchable database allowing comparison of traits across multiple species, likely a very useful feature, and we are unable to say if the *Birds of North America Online* uses the same unsatisfactory approach to selecting bird species that Cornell’s *Online Bird Guide* uses. One suspects that users of the Birds of North America site are much more likely to know the exact name of the birds they are researching, in any event.

Birds of North America Online is an excellent example of use of the Internet for presentation of scientific information, and it is especially pleasing to see that in transitioning printed material to the Web the creators made an easy-to-use site that takes good advantage of the multimedia and database interactivity capabilities of Web-based communication. Both the printed and multimedia content is of the highest quality, and the presentation beautiful. Even though we weren't able to fully evaluate the site, we're confident that anyone with a strong interest in birds would find it an extremely useful resource.

Illinois Breeding Bird Atlas (<http://www.inhs.uiuc.edu/chf/pub/ifwis/maps/>) and Illinois Birds (<http://www.inhs.uiuc.edu/chf/pub/ifwis/birds/>)

Lastly, we'll discuss briefly two sites closer to home, the *Illinois Breeding Bird Atlas*, and *Illinois Birds*. These two sites are actually subsections of the Illinois Natural History Survey, though they are not linked to each other. Both sites are relatively simple, and lacking in search or other navigation tools; the user simply picks a species of interest from a lengthy list.

The *Illinois Breeding Bird Atlas* is the simpler of the two sites; species are listed in alphabetical order by common name, and links next to the name lead to a map showing confirmed, probable, and possible sightings of the bird in Illinois; and another link leads to a single, uncaptioned photo. The maps are simple, but clear. The photos vary in quality, but in general are not as good as the other sites we reviewed.

Illinois Birds provides much more information than the *Illinois Breeding Bird Atlas*. A link from the common name of the species in question leads to a single, very long page loaded with useful information about the species, much of it in bulleted or table format. Information provided includes taxonomy, occurrence in Illinois, status, habitat associations, guilds, food habits, environmental associations, life history, management practices, and references. Some of the information is somewhat technical, and the slant is toward ecological information, which may be useful to many CW member organizations.

Though both sites are inelegant, both are relatively easy to use, and users should have no trouble locating and selecting a species of interest; reducing the total number bird species to those known to occur in Illinois makes for much shorter pull-down lists. Both sites are worth a look by CW members interested in birds, especially those interested in how birds fit into and interact with the environment in which they live.

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